

## REMARKS

Claims 14-16 and 19-21 are pending, with claims 14 and 21 being independent. Claims 14, 16, and 19-21 have been amended. No new matter has been added. Support for the amendments can be found on page 4, lines 5-6 and page 6, lines 6-14 of the Specification. In view of the present amendments and following remarks, reconsideration and allowance of this application are respectfully requested.

### **Rejections under 35 USC §112**

Claims 14-20 were rejected under 35 USC §112. Applicant has amended claim 14 to overcome the rejection.

### **Rejections under 35 USC §102/103**

Claims 14-18 were rejected (1) under 35 USC §102(b)/103(a) as anticipated by or obvious over Sanderson 4,541,944 and (2) under 35 USC §102(e)/103(a) as anticipated by or obvious over Del Duca et al 5,968,885 or 6,071,870. Claims 19-21 were rejected (3) under 35 USC §103(a) as obvious over Sanderson 4,541,944 or Del Duca et al 5,968,885 or 6,071,870. Claims 14-16 were rejected (4) under 35 USC §102(b)/103(a) as anticipated by or obvious over Scheuing et al 5,681,805 or 5,792,385 and (5) under 35 USC §102(e)/103(a) as anticipated by or obvious over Zhou et al 5,877,133 or Kott et al 6,117,357 or Miracle et al 6,096,098. Claims 14-15 were rejected (6) under 35 USC §102(e)/103(a) as anticipated by or obvious over Scialla et al 6,099,587 or 5,997,585 or 5,900,187. Claims 14 and 16-17 were rejected (7) under 35 USC §102(e)/103(a) as anticipated by or obvious over Choy 6,010,994. Claims 17-21 were further rejected (8) under 35 USC §103(a) as obvious over Scheuing et al 5,681,805 or 5,792,385, or Scialla et al 6,099,587 or 5,997,585 or

5,900,187, or Kott et al 6,117,357, or Miracle et al 6,096,098.

The Final Office Action mailed May 4, 2004 stated, in part, that “Applicant’s arguments for patentability . . . [that the] claimed invention is directed towards a chemical and biological warfare decontamination solution [and that] the applied prior art solutions are directed to other intended uses, such as washing, bleaching, cleaning, and/or disinfecting .” The Examiner’s Action concluded that this “argument of applicant, even if true, is irrelevant to the patentability of the pending claims”. The Examiner’s Action based this conclusion on (1) the use of anticipation rejections and (2) that the courts have ruled numerous times that a novel intended use for an otherwise old or obvious composition does not render said composition patentable.

Applicant respectfully disagrees.

Unlike the present claims that are directed to chemical and biological decontamination, Sanderson ‘473 and ‘944, Del Duca et al ‘885 and ‘870, Scheuing et al ‘385 and ‘805, Zhou et al ‘137, Kott et al ‘357, Miracle et al ‘098, Scialla et al ‘587, ‘585, or ‘187, and Choy et al ‘994 all apparently relate to cleaning compositions (Sanderson ‘473 relates to “washing, bleaching, or disinfection” at col. 1, lines 8-9; Sanderson ‘944 relates to “cleaning, bleaching or disinfection” at col. 1, lines 10-11; and Del Duca et al ‘885 and ‘870 relate to “pretreater” at col. 1, line 6 and col. 1, line 9, respectively; Scheuing et al ‘385 and ‘805, Zhou et al ‘137 relate to “bleaching or cleaning applications” at col. 1, lines 62-63, col. 1, lines 62-63 and col. 1, lines 65-66, respectively, Kott et al ‘357 and Miracle et al ‘098 relate to “laundry, automatic dishwashing and hard surface cleaning compositions” at col. 1, lines 17-19 and col. 1, lines 14-16, respectively; Scialla et al ‘587 relates to

a “pretreater” at col. 1, line 8, and Scialla et al ‘585 and ‘187 relate to “bleaching textiles” at col. 1, line 14 and col. 1, line 7, respectively; and Choy et al ‘994 refers to “bleaching and cleaning” at col. 1, lines 16-17).

Applicant disagrees that the explicit limitation, both in the preamble and body of the claim, of a decontaminating solution and composition, merely sets forth the intended use of an old composition. The claim limitation of a decontaminating solution/composition in the instant claims differentiates the present claims from the cleaning compositions of the cited references. *In re Pearson*, 181 USPQ 641, 644 (CCPA 1974) (stating that “[w]e do not mean to imply that terms which recite the intended use or a property of a composition can never be used to distinguish a new from an old composition. However, assuming their compliance with the definiteness requirement of the second paragraph of 35 U.S.C. 112, such terms must define, indirectly at least, some characteristic not found in the old composition.”); see also *In re Tuominen*, 213 USPQ 89 (CCPA 1982) (citing *In re Pearson* for a 102 rejection interpreting a preamble recitation of “sunscreen composition”). Unlike the *Tuominen* case, the present claims are limited by explicit limitations within the body of the instant claims, including “a decontaminating composition” that is further limited by the transition phrase “consisting essentially of.” As such, the present claims define solutions that are “nontoxic and useful in detoxifying/neutralizing a variety of chemical warfare agents” (see Specification at page 11, lines 20-21).

The references cited by the Examiner included formulations intended to be used in bleach formulations. Functionally, the cited patents and present claims using peracids in chemical warfare decontaminating solutions are quite different. In the bleach formulations, as taught by the cited

references, the peracid is used to bleach a material (generally laundry) in contrast to the decontaminating solution formulation of the present claims utilizing the peracid to oxidize chemical agents. Bleach formulations do not work as chemical agent decontaminants. Bleaches decolorize by oxidizing, such bleachable soils as chromophoric systems with conjugated carbon double bonds in polymethine chains, or quinoidic systems that acquire the properties of a dye through the presence of amino, hydroxyl, or carboxylic groups. As a chemical warfare decontaminant formulation, the present claims use aggressive oxidizers at fairly high concentrations for complete neutralization of the chemical agent. Oxidation of chemical agents, e.g., the sulfur atom in mustard gas/ nerve agent (VX) or the nitrogen atom in VX, necessitates large amounts of oxidizer, such as about 5% to 30% oxidizer.

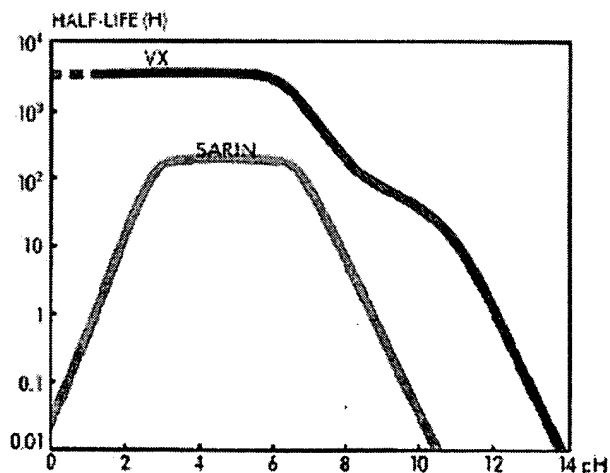
Disinfecting compositions disclosed in the cited references also do not provide a basis, either as a 102 or 103 rejection, for the present claims. Decontamination is the ridding of contamination whereas disinfection frees from infection esp. by destroying harmful microorganisms (*see Webster's Ninth New Collegiate Dictionary*, Merriam-Webster Inc. 1987). As the disclosures of the cited references teach disinfection, or other types of harsh cleaning, these references disclose compositions unsuitable for decontamination of "equipment, personnel, or the like" (Specification at page 12, lines 4-5) and/or are functionally inept as decontaminating compositions. Applicant notes that the examples of the cited patents generally teach away from the present claims. For example in Example IX of United States Patent No. 6,096,098 to Miracle et al, formulations of 7.0% and 5.0% Bleach Activator A with 10.0% Hydrogen Peroxide are listed. However, the pH 4 of the example makes this inappropriate for use in decontamination formulations. As well known in the art of chemical

warfare decontamination, G agents are susceptible to base, *i.e.*, high pH, hydrolysis, which is contrary to the teachings of the references. Likewise VX, for example, does not readily decompose at an acidic pH, such as the pH of 4 in Example IX. Applicant has attached a copy of an article “Nerve Agents”, at [www.Chefnoah.com/germ%20warfare/nerve\\_agents.htm](http://www.Chefnoah.com/germ%20warfare/nerve_agents.htm) (copyright 2002 Chef Noah), which states (at page 4):

“The most important chemical reactions of nerve agents take place directly at the phosphorus atom. The P-X bond is easily broken by nucleophilic reagents, such as water or hydroxyl ions (alkali). In aqueous solution at neutral pH the nerve agents decompose slowly, whereas the reaction is greatly accelerated following the addition of alkali. The result is a non-toxic phosphoric acid.

The pH-dependence on the rate of hydrolysis for sarin and VX at 25 °C expressed as half-life (hours). The curves have been calculated from laboratory experiments where pH was kept constant. On moist ground or snow, hydrolysis may be faster than shown in the figure as a result of auto-catalysis. The acidic hydrolysis products formed namely lead to a gradually lower pH and thus faster degradation.”

Additionally, the article provided the graph:



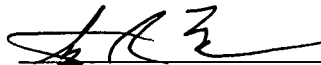
Applicant submits that the presently presented claims “define, indirectly at least, some

characteristic not found in the old composition” of the cited prior art and thus distinguish over the cited references.

Accordingly, Applicant requests reconsideration and allowance of claims 14-16 and 19-21.

Because the Applicant's reply filed on June 23, 2004 was filed within two months of the Final Rejection mailed May 4, 2004, the period for reply expires on the mailing date of the Advisory Action, which is August 10, 2004. Please apply the one month Petition for Extension of Time fee, and any other charges or credits, to deposit account 50-0967.

Respectfully submitted,



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